

APPENDIX C
DERIVATION OF SIZE ESTIMATES FOR SELECTED
FEDERAL FOOD ASSISTANCE PROGRAMS

For table 8.1 in Chapter 8, we derived estimates of the sizes of selected EFAS and federal nutrition government programs in terms of “meal equivalents.” This appendix provides additional details about parts of these calculations. In particular, explanations of two steps in the calculations were relegated to this appendix: the derivation of (1) the estimated weight of the ingredients for a meal for a low income household and (2) of the weight of an average WIC food package. Each is discussed below.

A. WEIGHT OF INGREDIENTS (PER PERSON) FOR A MEAL IN A LOW INCOME HOUSEHOLD

The 1987-88 Nationwide Food Consumption Survey collected detailed data on the foods used by a sample of approximately 4,300 U.S. households in preparing meals eaten at home. For each household, the data collection covered a 7-day period. Data were also obtained on meal-eating patterns of household members. Detailed statistics from the survey on the weights of various types of foods used over the 7-day period are available in a report from USDA (1994; see bibliography). In addition, factors are provided in the report for adjusting for differences across households in numbers of meals eaten from household food supplies.

In assessing these data it is important to note, as is discussed in the USDA report, that the response rate for the survey was only 38 percent, and this is widely viewed in the nutrition research community as a significant limitation of the data. Nevertheless, this report appears to be the best data source available for calculating weights per meal, and some independent support for the estimates we present below is provided by the fact that Second Harvest calculated a figure quite similar to ours using totally independent data (Second Harvest, 1998, p. 27).

Table 4 of the USDA report presents the weights of foods used, disaggregated into 20 food types and cross-tabulated by household income. We used data for the lowest income group (household income below \$12,500), and we used the weight data from all of the food groups except for “beverages.” The beverages data was omitted because significant amounts of this category were in coffee, tea, and soft drinks, unlikely to be distributed in quantity at most pantries. (Fruit and vegetable juices are in a separate food category and *are* included in our calculations.)

We added together the household data described above to get household pounds per week. We then divided by a factor of 1.97, which is the estimated number of persons per household in this income category, after adjusting for meals eaten outside the home (page 7 of the USDA report). Finally, the resulting estimate of pounds per person per week was divided by 21 meals per week to get estimated pounds per meal.

B. Weight of a WIC package

As specified in the WIC regulations (*U.S. Code of Federal Regulations*, Title 7), seven prototypical packages of WIC benefits are available, depending on the circumstances of the recipient. For each of the seven packages, we estimated the weight of the ingredients based on the specifications in the regulations. (Most are either directly specified in pounds or are liquids that were converted to pounds using nutrition software that links weight to quantity measures.)

Next, we estimated separate average weights for women, infants, and children, as follows: For infants there are two packages, one for the first 3 months of an infant's life and one for months 4-12. We took the weighted average of these two packages, with weights of one-quarter and three-quarters, respectively. For children, there is a single basic package; no averaging was necessary. For, women, we took the simple average of three packages—the basic package for pregnant and breast feeding women; the package for non-breastfeeding postpartum women; and the enhanced package for breastfeeding women. (The package for children and women with special needs was not included in the averaging.)

Finally, the overall weight (in pounds) of an average WIC package was estimated by taking the average of the weights (in pounds) for the three target groups, as computed above. In calculating this overall average, the three groups were weighted in proportion to their presence in the overall WIC caseload. The participation data for constructing weights for this averaging calculation were taken from the relevant USDA website: "[www.fns.usda.gov/pd/ WIC%20monthly.htm](http://www.fns.usda.gov/pd/WIC%20monthly.htm)".